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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,655	11/29/2001	Robert J. Meyer	D/A0735Q	2626

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EXAMINER

BRASE, SANDRA L

ART UNIT PAPER NUMBER

2852

DATE MAILED: 02/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	09/995,655	MEYER ET AL.	
	Examiner	Art Unit	
	Sandra L. Brase	2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

On-line 11 of claim 12, "bar" could be changed to "bars".

On line 12 of claim 12, "a trim bar" could be changed to "a trim bar of the plurality of trim bars".

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. Claims 1, 2, 5-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ojima et al. (US 5,519,472) in view of Yamashita (US 4,597,661) and Kudo et al. (US 4,297,384).

5. Ojima et al. (...472) disclose a development system comprising: a housing (7) defining a chamber storing a supply of developer material (figure 1); a donor member, mounted partially in the chamber and spaced from an imaging surface (2), for transporting developer on an outer surface thereof to a region opposed from the imaging surface (figure 1), where the donor member has a magnetic assembly (18) having a plurality of poles, a sleeve (8) enclosing the magnetic assembly, rotating about the magnetic assembly (figure 2); and a trim bar (26) at a predetermined position spaced from the donor member, where the trim bar includes a vibrating member for disrupting a developer bed and reducing the developer bed height of the developer material on the donor member to a predefined developer bed height (col. 3, lines 43-54 and col. 5, lines 1-17; col. 5, lines 55-63; col. 6, lines 20-27; and col. 8, lines 28-52). The trim bar comprises a shaped metal blade fastened to the wall of the development housing (col. 5, lines 1-3). The predefined developer bed height is 10-100 μm (col. 14, lines 13-15). A means (19) applies an oscillating electric field between the donor member and the imaging surface (col. 5, lines 19-36; and col. 7, line 64 – col. 8, line 4). The vibrating member vibrates at 1800 Hz (col. 5, line 36). However, Ojima et al. (...472) do not disclose the developer material comprising the claimed carrier and toner, the rpm of the donor member and the claimed plurality of trim bars. Yamashita (...661) discloses a developer material in a magnetic development system can be a one-component developer or a two-component developer, where a two-component developer includes a carrier and a toner (col. 1, lines 38-50). The carrier can be iron or ferrite (col. 1, lines 41-44). The

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donor member in the development system is rotated at 200 rpm (col. 5, lines 20-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the developer material be a two-component developer with the claimed carrier and toner since such a developer material is notoriously well known in the art, as disclosed by Yamashita (...661), and it would have also been obvious to rotate the donor member at the claimed rpm since such a rotating speed for a donor member in a developing operation is well known in the art, as disclosed by Yamashita (...661). Kudo et al. (...384) disclose a development system that includes a plurality of trim bars (15a and 15b) positioned about a donor roll (13) at a predefined plurality of positions and spacing around the donor roll (col. 2, lines 33-38). It would have been obvious to one of ordinary skill in the art at the time of the invention to have a plurality of trim bars, as disclosed by Kudo et al. (...384) so as to control the thickness of developer layer to obtain a toner image of desirable image density.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ojima et al. (US 5,519,472) in view of Yamashita (US 4,597,661) and Kudo et al. (US 4,297,384) as applied to claim 1 above, and further in view of Hirata et al. (US 5,532,804).

7. Ojima et al. (...472) in view of Yamashita (...661) and Kudo et al. (...384) disclose the features mentioned previously, but do not disclose the pole spacing of the magnetic assembly. Hirata et al. (...804) disclose a development system including a magnetic assembly with a pole spacing of 1-10 mm (col. 13, lines 23-35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a pole spacing in the claimed range so as to

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transport a sufficient amount of developer material during the developing operation, as disclosed by Hirata et al. (...804).

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ojima et al. (US 5,519,472) in view of Yamashita (US 4,597,661), Kudo et al. (US 4,297,384) and Hirata et al. (US 5,532,804) as applied to claim 3 above, and further in view of Tajima et al. (US 4,936,249).

9. Ojima et al. (...472) in view of Yamashita (...661), Kudo et al. (...384) and Hirata et al. (...804) disclose the features mentioned previously, but do not disclose the thickness of the sleeve. Tajima et al. (...249) disclose a development system with a sleeve (2), which encloses a magnetic assembly, having a thickness of 0.25 – 1.5 mm (col. 4, lines 64-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the claimed sleeve thickness since it is well known in the art for a sleeve in a development system to have such a thickness, as disclosed by Tajima et al. (...249).

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ojima et al. (US 5,519,472) in view of Yamashita (US 4,597,661) and Kudo et al. (US 4,297,384) as applied to claim 1 above, and further in view of Kanno et al. (US 4,538,898).

11. Ojima et al. (...472) in view of Yamashita (...661) and Kudo et al. (...384) disclose the features mentioned previously, but do not disclose the vibrating member comprising a piezoelectric element. Kanno et al. (...898) disclose a development system including a blade that is vibrated by a piezoelectric element (col. 9, lines 32-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the vibrating member comprise

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a piezoelectric element, as disclosed by Kanno et al. (...898), since it is well known in the art to use a piezoelectric element as a vibrating member of a blade in a development system.

12. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ojima et al. (US 5,519,472) in view of Yamashita (US 4,597,661), Kudo et al. (US 4,297,384) and Kanno et al. (US 4,538,898).

13. Ojima et al. (...472) disclose a development system comprising: a housing (7) defining a chamber storing a supply of developer material (figure 1); a donor member, mounted partially in the chamber and spaced from an imaging surface (2), for transporting developer on an outer surface thereof to a region opposed from the imaging surface (figure 1), where the donor member has a magnetic assembly (18) having a plurality of poles, a sleeve (8) enclosing the magnetic assembly, rotating about the magnetic assembly (figure 2); and a trim bar (26) positioned about a donor roll at a predefined position and spacing around the donor roll, where the trim bar includes a vibrating member for disrupting a developer bed and reducing the developer bed height of the developer material on the donor member to a predefined developer bed height (col. 3, lines 43-54 and col. 5, lines 1-17; col. 5, lines 55-63; col. 6, lines 20-27; and col. 8, lines 28-52). However, Ojima et al. (...472) do not disclose the developer material comprising carrier and toner, a plurality of trim bars and the vibrating member including a piezoelectric element. Yamashita (...661) discloses a developer material in a magnetic development system can be a one-component developer or a two-component developer, where a two-component developer includes a carrier and a toner (col. 1, lines 38-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the developer material be a

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two-component developer with the claimed carrier and toner since such a developer material is notoriously well known in the art, as disclosed by Yamashita (...661). Kudo et al. (...384) disclose a development system that includes a plurality of trim bars (15a and 15b) positioned about a donor roll (13) at a predefined plurality of positions and spacing around the donor roll (col. 2, lines 33-38). It would have been obvious to one of ordinary skill in the art at the time of the invention to have a plurality of trim bars, as disclosed by Kudo et al. (...384) so as to control the thickness of a developer layer to obtain a toner image of desirable image density. Kanno et al. (...898) disclose a development system including a blade that is vibrated by a piezoelectric element (col. 9, lines 32-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the vibrating member comprise a piezoelectric element, as disclosed by Kanno et al. (...898), since it is well known in the art to use a piezoelectric element as a vibrating member of a blade in a development system.

Response to Arguments

14. Applicant's arguments filed 11/26/03 have been fully considered but they are not persuasive.

Applicant argues that Ojima et al. (US 5,519,472), Yamashita (US 4,597,661), Hirata et al. (US 5,532,804) and Tajima et al. (US 4,936,249) and Kanno et al. (US 4,538,898) do not disclose the claimed plurality of trim bars, but this argument is moot since they were not used in the above rejections to disclose this feature.

15. Applicant further argues that Kudo et al. (US 4,297,384) do not disclose a donor roll which is spaced from an imaging member and a plurality of trim bars positioned about a donor

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roll at a plurality of predefined positions and spacing around the donor roll. However, this is incorrect. Kudo et al. (...384) disclose a donor roll (13) spaced from an imaging member (16), and a plurality of trim bars (15a and 15b). Also, applicant argues that Kudo et al. (...384) do not disclose the vibrating member, but this argument is moot since it was not used in the above rejections to teach this feature.

Final Rejection

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra L. Brase whose telephone number is (703) 308-3101. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur T. Grimley, can be reached on 703-308-1373. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sandra L. Brase
Primary Examiner
Art Unit 2852

February 4, 2004